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10/550,157	09/20/2005	Majd Alwan	21764L-001100US	5323
20350 7590 12/19/2008 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834				
EXAMINER				
PANI, JOHN				
ART UNIT		PAPER NUMBER		
3736				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/550,157

**Applicant(s)**

ALWAN ET AL.

**Examiner**

JOHN PANI

**Art Unit**

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2008 has been entered.

### ***Claim Objections***

2. Claims 12, 13, 31, and 32 are objected to because of the following informalities: In order to increase the clarity of the claims, the following suggestions are provided. In claims 12 and 13 line 1 it is suggested to insert —wherein—prior to said. In claims 31 and 32 line 1 it is suggested to insert —wherein—prior to “the gait”. In line 2 of claim 41 it is suggested to insert —embedded thereon—after “computer logic”. In line 3 of claim 41 it is suggested to replace “comprising” with —configured to cause the computer system to--. In line 6 it is suggested to replace “walks” with —can walk--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-23 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In reference to Claims 1-23

In claim 1, line 3 recites "floor that detects"; line 5 recites "subject walks"; and line 7 recites "module that analyzes". This language makes it unclear whether the claim is directed towards a process or an apparatus, and thus the scope of the claims is indefinite. It is suggested to replace "that detects" with --for detecting--, "subject walks" with --subject can walk--, and "that analyzes" with --for analyzing--or --configured for analyzing--.

In reference to Claims 16 and 17

Claim 16 recites "said archival storage module stores at least one of longitudinal analysis of gait characteristics, pattern recognition, and identification determination." It is unclear whether the claim refers to, for example, analysis software/algorithm/etc., pattern recognition software/algorithm/etc., and identification determination software/algorithm/etc., or is instead directed to data from longitudinal analysis of gait characteristics, data from pattern recognition, and data from identification determination.

In reference to Claim 17

Claim 17 line 1 recites "module analyzes". This language makes it unclear whether the claim is directed towards a process or an apparatus, and thus the scope of

the claims is indefinite. It is suggested to replace "module analyzes" with –module for analyzing— or –module configured to analyze--.

In reference to Claim 18

Claim 18 line 2 recites "module analyzes". This language makes it unclear whether the claim is directed towards a process or an apparatus, and thus the scope of the claims is indefinite. It is suggested to replace "module analyzes" with –module for analyzing— or –module configured to analyze--. Lines 2-3 refer to "the gait characteristics, pattern recognition, and identification data." This limitation lacks antecedent basis in the claims.

In reference to Claims 21 and 22

Claims 21 and 22 lines 1-2 recite "module that processes". This language makes it unclear whether the claim is directed towards a process or an apparatus, and thus the scope of the claims is indefinite. It is suggested to replace "module that processes" with –module for processing— or –module configured to process--. Line 2 of claims 21 and 22 recites "said acceleration, vibration, and deflection module." The limitation lacks antecedent basis in the claims.

In reference to Claim 41

Claim 41 recites "computer logic comprising: detecting at least one of floor acceleration, floor vibration, and floor deflection to provide acceleration, vibration, and deflection signal, wherein said detecting step is provided by a sensor module touching the upper surface of a floor, and wherein the subject walks on the upper surface of the floor in proximity to said sensor module". It is unclear from the claim exactly what the

computer logic is comprised of. Based on the specification and claims it appears that the sensor module "detect[s] at least one of...to provide...signal". However, as claimed it appears that the computer logic is detecting and providing, and possibly even causing a subject to walk on the upper surface of the floor. An alternative interpretation is that the computer logic itself is merely "analyzing the acceleration, vibration, and deflection signal for determining gait characteristics." If the latter is the claimed invention it is suggested to somehow move the remainder of the claim language into the preamble in some way to clarify what the computer logic actually consists of.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 7-9, 12-23, 24-29, and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 4,121,192 to Wilson ("Wilson") in view of US Pat. No. 4,214,485 to Berger et al. ("Berger").

#### In reference to Claims 1, 24, and 41

Wilson teaches a system, method, and computer logic for monitoring gait characteristics of a subject, said system comprising a sensor module ("sensors" in addition to 10-13; see at least col. 2 lines 15-65) that detects at least one of floor acceleration, floor vibration, and floor deflection to provide acceleration, vibration, and

deflection signal, wherein the subject walks on the upper surface of the floor in proximity to said sensor module (col. 5 lines 59-66); and a processor module (see col. 7-col. 10) that analyzes the acceleration, vibration, and deflection signal for determining gait characteristics (velocity, position, etc.). Wilson teaches that the sensors are often seismic detectors and may be any mechanism capable of detecting relative movement of an object (col. 12).

Berger teaches a seismic vibration detector, explicitly described as applicable to intrusion detection, which, when mounted on a floor, will detect even the slightest vibration caused by footsteps (see col. 1 lines 55-60). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the system and method of Wilson by using seismic vibration sensors placed on the ground, as taught by Berger, because it is obvious for one of ordinary skill in the art to use an art recognized sensor configuration to predictably achieve an art recognized desired result (in this case, monitoring vibrations from footsteps).

In reference to Claims 2-4 and 25-27

Wilson in view of Berger teaches the system and method of claims 1 and 24 (see above) and Wilson further teaches an output module for receiving data indicative of the gait characteristics, wherein said output module comprises at least one of display (40), alarm, memory storage, communication device, printer, buzzer, PDA, lap top computer, computer, audio or visual alarm, and light. Note that as written, claims 4 and 27 depend from claims 3 and 26 which are rejected with an output module that is a display. Claims

4 and 27 as written do not require that the output module be a communication device from the list of modem, pager, etc.

In reference to Claims 7 and 8

Wilson in view of Berger teaches the system of claim 1 (see above) and Wilson further teaches the sensor module and processor module are in a hard wired communication (see col. 2 lines 40-50) comprising at least one of electronic, integrated circuit, electromagnetic, wire, cable, fire optics, phone line, twisted pair, and coaxial.

In reference to Claim 9, 28, and 29

Wilson in view of Berger teach the system and method of claims 1 and 24 (see above) and Wilson further teaches detecting a rate-of-travel of the subject using a rate-of-travel detector (processor determines velocity of intruder) to determine the rate-of-travel of the subject.

In reference to Claims 12-13 and 31-32

Wilson in view of Berger teach the system and method of claims 1, 9, 24, and 28 (see above) wherein the gait characteristics include at least pace and average walking velocity (monitors intruder velocity, which, when intruder is walking is average walking velocity and pace).

In reference to Claims 14, 21, 22, 33, 39, and 40

Wilson in view of Berger teach the system and method of claims 1 and 24 (see above) and Wilson further teaches the gait characteristics include falls (an impact with the ground including a fall would be registered by the sensor; additionally, a foot impact



is the foot falling to the ground). The processor is thus a fall/step module that processes data received from acceleration/vibration/deflection module

In reference to Claims 15-17 and 34-36

Wilson in view of Berger teach the system and method of claims 1 and 24 (see above) and Wilson teaches storing data on an archival storage module ("memory", see col. 7-10), wherein the archival storage module stores a longitudinal analysis of gait characteristics (velocity is longitudinal) and the processor module analyzes the gait characteristics (col. 7-10).

In reference to Claims 18 and 23

Wilson in view of Berger teach the system of claim 1 (see above) and Wilson further teaches a second processor module (see col. 10, the functions of the processor can be interpreted as separate modules), wherein said second processor module analyzes the gait characteristics (velocity, etc.), pattern recognition (physical position determination is pattern recognition), and identification data (group head is determined).

In reference to Claims 19-20 and 37-38

Wilson in view of Berger teach the system and method of claims 1 and 24 (see above) wherein the subject is a human and an animate object (col. 5).

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Berger as applied to claim 1 above, and further in view of US 2002/0107649 to Takiguchi et al. ("Takiguchi").

In reference to Claims 5 and 6

Wilson in view of Berger teaches the system of claim 1 (see above) but do not explicitly teach that the sensor and processor are in wireless communication. Takiguchi teaches connecting a sensor module (microphone) to a processor module (analyzer) using either a connection cord or wireless communication such as infrared rays (see [0019]). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the system of Wilson in view of Berger by wirelessly connecting the sensors to the processor using infrared as taught by Takiguchi, for example so that the connection could not be easily physically disrupted via a cut line.

8. Claims 11 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Berger as applied to claims 9 and 28 above, and further in view of US Pat. No. 5,831,937 to Weir et al. ("Weir").

Wilson in view of Berger teach the system and method of claims 9 and 28 (see above) but do not explicitly disclose using a rate-of-travel detector using ultrasonic communication. Weir teaches a gait analysis system with a rate-of-travel detector that uses ultrasound and infrared (see col. 4 line 65-col. 5 line 44). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the system and method of Wilson in view of Berger by adding a rate-of-travel detector similar to that of Weir because this would allow for duplicity of speed measurements, thereby increasing the systems accuracy.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Berger as applied to claim 9 above, and further in view of US Pat. No. 6,006,165 to Okada ("Okada").

Wilson in view of Berger teach the system of claim 9 (see above) but do not expressly disclose a rate-of-travel detector with a plurality of beam breaks, floor switches, or door switches. Okada teaches a speed measuring apparatus that uses a plurality of beam breaks (see col. 3 lines 1-45). It would have been obvious to one having ordinary skill in the art at the time of the invention to have added a speed measuring device with a plurality of beam breaks in order to allow duplicity of speed measurements, thereby increasing the system accuracy.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN PANI whose telephone number is (571)270-1996. The examiner can normally be reached on Monday-Friday 7:30 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP 12/16/08

/Max Hindenburg/  
Supervisory Patent Examiner, Art Unit 3736